(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 1 795 129 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
18.06.2008 Bulletin 2008/25

(43) Date of publication A2:
13.06.2007 Bulletin 2007/24

(21) Application number: **06025081.8**

(22) Date of filing: **05.12.2006**

(51) Int Cl.:
A61B 8/08 *(2006.01)* ***G01S 15/89*** *(2006.01)*

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK RS

(30) Priority: **06.12.2005 KR 20050117909**

(71) Applicant: **MEDISON CO., LTD.**
Kangwon-do 250-870 (KR)

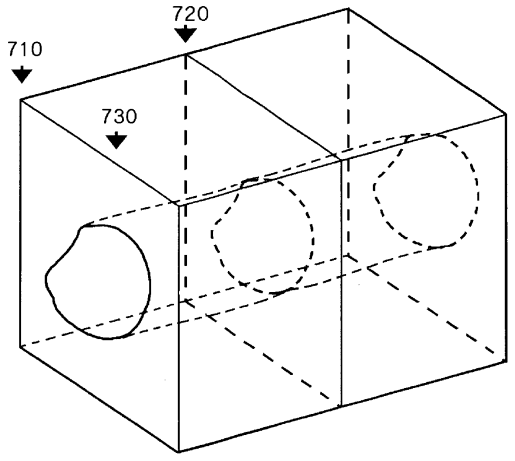
(72) Inventor: **Hyun, Dong Gyu**
Gangnam-gu,
Seoul 135-280 (KR)

(74) Representative: **Lorenz, Markus**
Lorenz & Kollegen
Alte Ulmer Strasse 2
89522 Heidenheim (DE)

(54) Apparatus and method for displaying an ultrasound image

(57) Embodiments of the present invention may provide an apparatus and a method for displaying a 3-dimensional ultrasound image formed based on 2-dimensional ultrasound images. The method for displaying an ultrasound image, comprises: a) forming and storing a plurality of sequential 2-dimensional ultrasound images based on ultrasound echo signals reflected from a target object, each of said sequential 2-dimensional ultrasound images being assigned a serial number; b) selecting N numbers of 2-dimensional ultrasound images having consecutive serial numbers; c) superposing the N number of 2-dimensional ultrasound images to form a 3-dimensional ultrasound image; d) forming a flow direction marker indicating a first 2-dimensional ultrasound image from the N numbers of 2-dimensional ultrasound images; e) displaying the 3-dimensional ultrasound image together with the flow direction marker on a screen; f) removing the first 2-dimensional ultrasound image from the N numbers of 2-dimensional ultrasound images; g) selecting a $(N+1)^{th}$ 2-dimensional ultrasound image and superposing the selected 2-dimensional ultrasound image to the superposed 2-dimensional ultrasound images; and h) repeating the steps c) to h) as many as a predetermined number.

FIG. 7



EP 1 795 129 A3

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 02 5081

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X Y	EP 0 881 506 A (ADVANCED TECH LAB [US]) 2 December 1998 (1998-12-02) * abstract; figures 1-5 * * column 2, line 18 - line 58 * * column 4, line 56 - column 6, line 16 * * column 5, line 33 - line 43 * * column 6, line 2 - line 14 * * column 7, line 23 * -----	10 1-9, 11-14	INV. A61B8/08 G01S15/89
Y	DENDY P P ET AL: "Physics for Diagnostic Radiology , Passage" PHYSICS OF DIAGNOSTIC RADIOLOGY, IOP, BRISTOL, US, 15 April 1999 (1999-04-15), pages 344-345, XP002446931 * paragraph [13.6.3] * -----	1-9, 11-14	
Y	US 5 515 856 A (OLSTAD BJORN [NO] ET AL) 14 May 1996 (1996-05-14) * the whole document * -----	4,9,14	

TECHNICAL FIELDS SEARCHED (IPC)

A61B
G01S

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	2 May 2008	Koprinarov, Ivaylo

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 06 02 5081

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

02-05-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0881506 A	02-12-1998	AU 6810098 A	03-12-1998
		CA 2235998 A1	29-11-1998
		JP 11047132 A	23-02-1999
		NO 982446 A	30-11-1998
		US 5916168 A	29-06-1999
US 5515856 A	14-05-1996	DE 19531419 A1	07-03-1996
		FR 2723835 A1	01-03-1996
		IT MI951824 A1	29-02-1996

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82